

March 2006



Volume 11 No. 3

Report to

STAKEHOLDERS

<http://www.edwards.af.mil/penvmng/index.html>

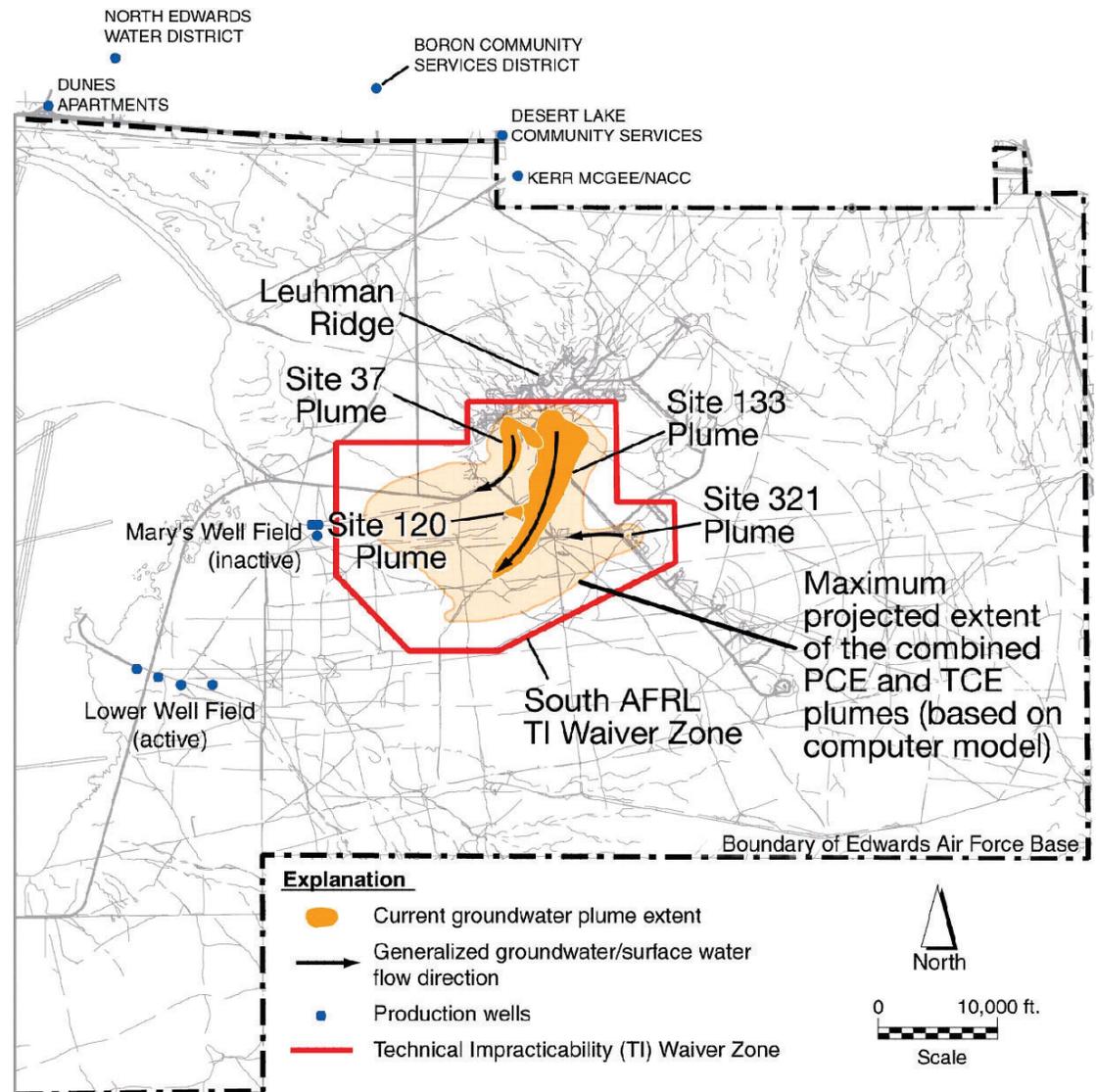
Air Force to seek public comment on research laboratory cleanup plan

4

Restoration Advisory Board member David Newman, a chemistry professor at Antelope Valley College, was Les Uhazy's backup. Now Newman is the "go to" guy for community members in Rosamond, Calif. Les Uhazy, also a professor at AVC, is the alternate.

6

Environmental Restoration Program's chemical warfare material sites have dwindled to one site out of the 27.



SOME INSIGHT — This map shows the South Air Force Research Laboratory (AFRL) technical impracticability waiver area and the projected maximum spread of the contaminants. The AFRL is in the Environmental Restoration Program's Operable Units (OU) 4 and 9. The Proposed Plan for this area will be out for public comment soon. For full coverage go to page 3.



Q. Where does Edwards Air Force Base (AFB) get its funds to clean up sites? Do the funds come from the U.S. Environmental Protection Agency's Superfund money?

A. Each fiscal year, the Environmental Restoration Program (ERP) puts together narratives on its proposed projects and presents them to Headquarters Air Force Materiel Command (AFMC).

The process of preparing narratives is an exacting one, requiring a detailed description of the objectives hoped to be attained by each project. Careful attention has to be paid to ensure that compliance with Department of Defense (DOD) guidance is maintained and that priorities set by Edwards AFB and the Restoration Advisory Board are met.

It is at the meeting with AFMC that each narrative is examined by the chief of the AFMC Environmental Programs Branch and the program manager. The purpose of the review is to ensure that each project is consistent with the DOD Cleanup Program Guidance and the requirements of the Federal Facility Agreement, or FFA. Under the FFA, Edwards has been working with regulators for more than a decade to clean up past contamination on the base. The FFA calls for completion of Records of Decision (ROD) for 471 cleanup sites identified at Edwards. Of the 471 sites, 382 have been closed because there was no contamination or levels were below regulatory limits. There are 47 that are in active cleanup, seven are in ROD, five are in long-term monitoring and six are under investigation.

The amount of money the Air Force competes for each fiscal year is determined by Congress. Congress appropriates the Defense Environmental Restoration Account budget. It is from this process that Headquarters AFMC gets its share and distributes the money to each base in the command.

If you have a question about the Edwards Air Force Base Environmental Management program, you may address it to Stakeholders Forum, Attn: Gary Hatch or Miriam Horning, 5 E. Popson Ave., Edwards AFB, CA 93524-8060, or send e-mail to: gary.hatch@edwards.af.mil

Next RAB Meeting

May 2006
5:30 p.m.
Mojave

Date and Location To Be Determined

The public is invited.

Report to Stakeholders is a publication of the Edwards AFB Environmental Management Division. Its purpose is to inform and educate the public, base workers and residents about continuing Environmental Management efforts at Edwards AFB. It currently has a circulation of 6,000, including about 2,000 subscribers.

Contents of the Report to Stakeholders are not necessarily the official view of, or endorsed by, the U.S. government, the Department of Defense, or the Department of the Air Force.

All photos are property of the Air Force. Comments or questions should be directed to: Gary Hatch, 95 ABW/PAE, 5 E. Popson Ave., Bldg. 2650A, Edwards AFB, CA 93524-8060, (661) 277-1454. E-mail: gary.hatch@edwards.af.mil

Report to STAKEHOLDERS



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Base Civil Engineer..... James Judkins
Division Chief Environmental Management..... Robert Wood
Branch Chief Environmental Restoration..... Ai Duong
Branch Chief Environmental Conservation..... Gerald Callahan
Branch Chief Environmental Quality..... Robert Shirley



Cleanup plan proposes alternative to monitor groundwater movement and limit future use of land through land use controls in an 18-square-mile area

The Air Force will soon be asking the public to comment on proposed cleanup plans for contamination in groundwater beneath the southern portion of the Air Force Research Laboratory (South AFRL) at Edwards Air Force Base.

Several alternative cleanup plans are described in an Air Force report entitled *CERCLA Proposed Plan for the South Air Force Research Laboratory: Monitoring of Groundwater and Land Use Controls at the South Air Force Research Laboratory*.

This 24-page document describes the alternatives being considered by the Air Force and its regulatory agencies to address contamination in the groundwater beneath four main sites: Sites 37, 120, 133 and 321.

These sites are located on the southern side of the Leuhman Ridge escarpment where most AFRL activity takes place. The sites are described in detail within the Proposed Plan. Contamination from these sites is slowly moving toward the center of the base, away from the boundaries.

The major contaminants at these four sites are the chemicals tetrachloroethene (PCE) and trichloroethene (TCE). These solvents were used for years to clean grease off engines and other items at the South AFRL.

Both chemicals are hard to remove from the ground because they are heavier than water and sink in groundwater. The underground geology of the South AFRL is composed of a layer of sand on top of cracked and fractured bedrock. Removing chemicals and groundwater from this bedrock is extremely difficult.

Preferred Alternative

The Proposed Plan highlights the alternative preferred by the Air Force (with regulatory approval) to monitor the groundwater movement and limit the future use of the land, through land use controls in an 18-square-mile area. Currently, there is no technology for the efficient, cost-effective removal of contaminated groundwater from the cracked bedrock in which it resides.

This preferred alternative requires a Technical Impracticability waiver for some environmental cleanup rules and regulations. (These environmental rules and regulations are called Applicable or Relevant and Appropriate Requirements, or ARARs.) The waiver is being sought from the U.S. Environmental Protection Agency (U.S. EPA).

This plan and four alternatives are described in detail starting on page 15 of the Proposed Plan.

The plan evaluates all five alternatives against nine criteria, or standards, set up in the environmental regulation called the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*, or Superfund law. A simplified table showing the alternatives versus the criteria is located on page 21 of the Proposed Plan.

Public Participation and Comments

The Air Force provides information regarding the cleanup of South AFRL to the public through the Restoration Advisory Board, the Administrative Record file for the site, the Environmental Management website (<http://www.edwards.af.mil/>

[penvmng/index-toc.html](#)), and the monthly publication *Report to Stakeholders*.

More Information Available

The Air Force encourages the public to gain a more complete understanding of South AFRL and the cleanup activities conducted there. All documents that the base used to make decisions about cleanup at South AFRL are in the base's administrative record. If you would like to view the full administrative record, you must make an appointment with Gary Hatch during regular business hours. Contact Mr. Hatch at:

95 ABW/PAE

Attn: Gary Hatch

5 E. Popson Ave, Bldg. 2650A

Edwards AFB, CA 93524-8060

Phone: (661) 277-1454

Fax: (661) 277-6145

E-mail: Gary.Hatch@edwards.af.mil

Hours: By appointment only,
Monday through Friday
8 a.m. to 4:30 p.m.

To view a subset of decision documents, you may also visit one of the other four Information Repository locations listed in the box below.

To Make a Comment

Comments can be made at public meetings or you can mail, e-mail, or fax your comments on the South AFRL Proposed Plan to Gary Hatch using the contact information above. A form is provided on page 24 of the Proposed Plan, but written comments may be submitted in any form. RTS

How to Get More Information

For more information on the underground contamination at the South AFRL, technical documents may be reviewed at the following Information Repositories.

Edwards AFB Library

5 W. Yeager Blvd.
Building 2665
Edwards AFB, Calif.
(661) 275-2665

Kern County Public Library

Wanda Kirk Branch
3611 Rosamond Blvd.
Rosamond, Calif.
(661) 256-3236

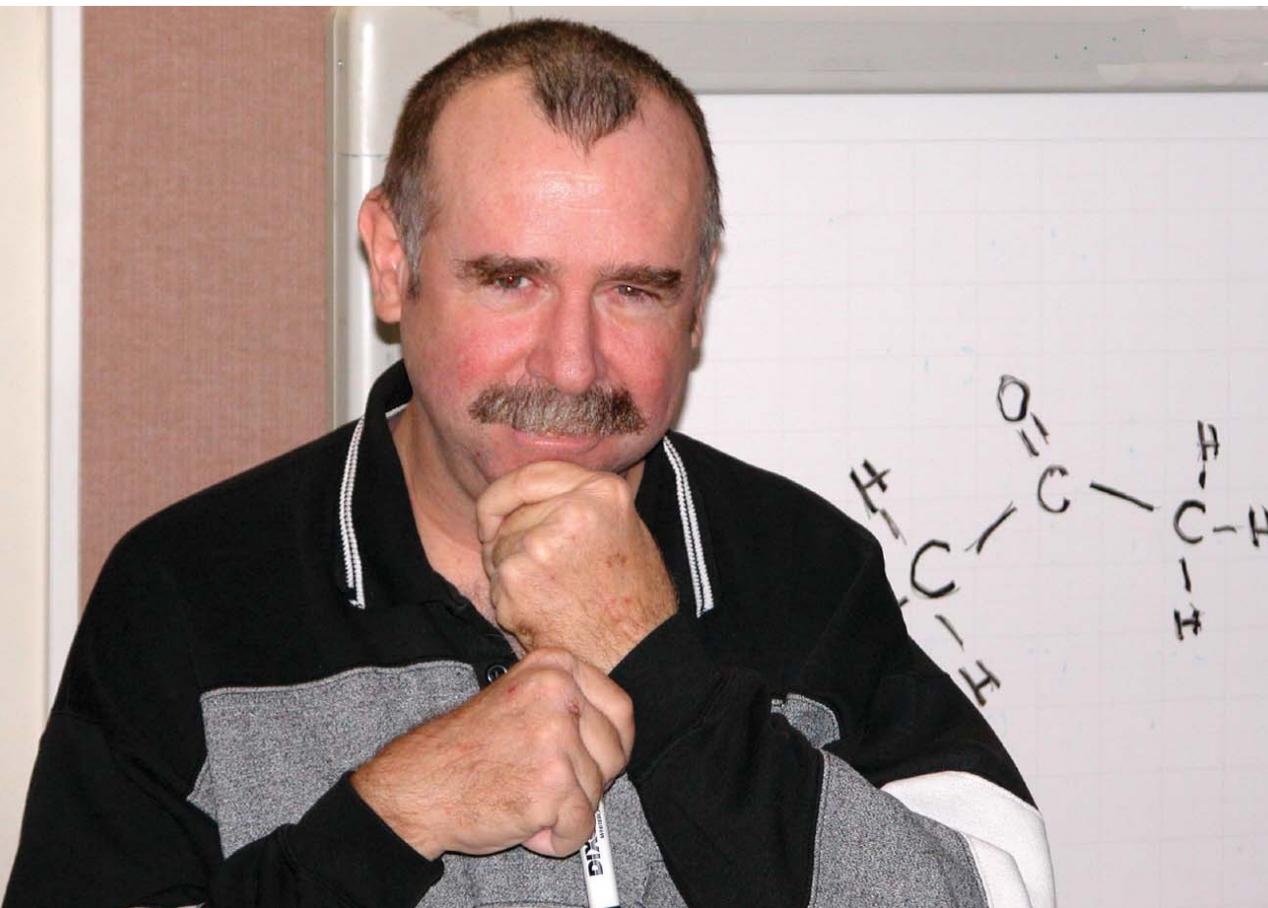
Los Angeles County Public Library

601 W. Lancaster Blvd.
Lancaster, Calif.
(661) 948-5029

Col. Vernon P. Saxon, Jr.

Aerospace Museum
26962 Twenty Mule Team Road
Boron, Calif.
(760) 762-6600

LOCAL CHEMISTRY PROFESSOR + COMMUNITY INTEREST EQUALS ROSAMOND'S RAB REPRESENTATIVE



YOUR THOUGHTS?
David Newman, a chemistry professor at Antelope Valley College (AVC) in Lancaster, Calif., was the alternate Restoration Advisory Board member to Leslie Uhazy, Dean of Math and Science at AVC, and stepped into the primary RAB representative position for the community of Rosamond, Calif., in 2004. The chemical formula in the background is acetone.

Spend five minutes with David Newman, Ph.D., and you can see that he has a strong interest in his community and a knack for communicating ideas clearly – not surprising, considering that he has years of experience teaching chemistry to college students. Newman also uses his talent to keep Rosamond citizens informed about hazardous waste cleanup at Edwards Air Force Base (AFB). In November 2004, he

became the town's full-time Restoration Advisory Board (RAB) representative, replacing colleague Leslie Uhazy, Ph.D., the Dean of Math and Sciences at Antelope Valley College (AVC).

The RAB promotes two-way communication between the public and the Air Force on the restoration activities at Edwards.

A California native, born in Redwood City, Newman began following the base's cleanup

activities in 1992, three years before the RAB was formed. One of the local newspapers advertised a vacancy for a public representative on the Technical Review Committee (TRC) – the precursor to the RAB. Newman was curious and started attending TRC and later RAB meetings as a concerned citizen.

“The base's proximity to Rosamond made me wonder about the extent of the contamination. Basically, I wanted to know what was

going on and how it would affect the town I lived in,” Newman said.

When the opportunity presented itself, Newman wasted no time getting more involved. He became Rosamond’s alternate public representative in 2000; the same year the RAB charter and bylaws were revised to include alternates for each community. Alternates attend meetings when the primary is absent, serve as points of contact for the community and distribute copies of *Report to Stakeholders* – a monthly newsletter detailing environmental activities at Edwards AFB. Even as an alternate, Newman rarely missed a meeting.

“The meetings sometimes cover technical detail involving the chemical reactions used to break down the contamination,” Newman added. “I can follow the science in the presentation and speak up if something does not make sense.”

A tenured professor at AVC in Lancaster, Newman enjoys teaching his favorite subject – chemistry. He recalled having two career ambitions while growing up in the San Francisco Bay area.

“I wanted to become an aeronautical engineer or a chemist. A high-school chemistry class decided my fate. Once I discovered that I could make things explode, I was hooked,” he said.

After attending a junior college in Fremont, Newman received his undergraduate degree at California State East Bay and his

doctorate in organic chemistry from the University of California (UC) Berkley.

Newman joined the workforce as an organic chemist at UC Irvine. For two years he tested transition metals to see if chemical bonds in molecules could be broken down to form new products.

“The type of reaction was similar to the one found in a catalytic converter. The transition metal helped to break down bonds and force a chemical reaction. It was interesting and frustrating work,” Newman said.

In 1989, Newman returned to Berkley to teach. He wanted to put his knowledge to better use by helping people. “As a graduate student, I had the responsibility of teaching a group of 24 undergraduates in a laboratory setting,” he said. “For me, it was a great experience. When you teach, you make a connection with your students. It’s very rewarding to see confusion give way to understanding when you explain a difficult concept.”

But an academic career at UC Berkley limited him from doing the one thing he felt was most important as a teacher. “At a university or four-year college, professors are expected to do research and get published in addition to teaching classes. There’s not much time to work with the undergraduates and I missed the interaction,” Newman said.

When he saw a kiosk at a statewide job fair advertising job openings at AVC, a community college, Newman leapt at the chance.

“The atmosphere and class sizes at community colleges promote more personal interaction with students,” Newman said. “I knew I’d be able to do more hands-on teaching and really help undergraduates master the laws of chemistry.”

Newman keeps up to date professionally as a member of the Two-Year College Chemistry Consortium, a branch of the Division of Chemical Education under the American Chemical Society.

Newman still laughs when he remembers his first experience in the Antelope Valley. “I drove from northern California to Lancaster for an interview with the college. My introductory drive through the Mojave Desert included a dust storm that rivaled a hurricane of sand.”

But he didn’t let the weather or lack of greenery stop him from planting roots in Rosamond. “I loved the wide open spaces and the desert has a beauty you cannot find anywhere else,” Newman said.

As Rosamond grows in size, the wide-open spaces Newman is so fond of are slowly diminishing. The town’s growth has encouraged him to join forces with the organization that placed him on the RAB.

“Rosamond is starting to develop and there are new housing areas that seem to be cropping up everywhere you look. I’m working with the Rosamond Community Services District on a project to create rec-

See Newman, page 7

A LIGHT MOMENT
Dr. David Newman,
Rosamond RAB
representative and
Amy Bouchard,
former Base Housing
representative
discuss a few things
with state regulators
at a RAB meeting in
Rosamond, Calif.



List of 27 potential chemical warfare materiel sites decreases to one

The Restoration Branch of Environmental Management is nearing completion of a decade-long effort to investigate 27 potential chemical warfare materiel (CWM) sites at Edwards Air Force Base. Potential risks were identified at two of the 27 sites under investigation. Only one of these remains on the list to complete the CWM work.

Site 426, a World War II CWM storage yard located on Main Base contained no CWM. The site was given a clean bill of health January 2003.

The one remaining CWM site on the list is Site 442, the Known Explosive Ordnance Division Burial Locations. Site 442 is located on the base's Precision Impact Range Area, or PIRA, a remote, unpopulated area encompassing about 12 acres of the base and accessible only by dirt roads. The site includes three noncontiguous areas containing debris, burial trenches and pits. Although there is visual, as well as historical, evidence of military activities in the area that points to buried CWM, no verification of actual chemical warfare agents or degradation products at these locations has been made, said program manager Rebecca Hobbs.



BURIAL SITE — This chemical warfare materiel (CWM) burial site at Edwards Air Force Base is one of 27 sites the ERP has checked for CWM.



LIGHTS, CAMERA, ACTION — News photographers stand near planes at Muroc Army Air Field in May 1937. During this time the military was conducting smoke tests.

Most of what is known about what might be buried at Site 442 was gleaned from archival research and fieldwork performed by Hobbs and others beginning in 1995. Historic documents and aerial photos show that activities taking place in the vicinity from 1942 to 1952 included missions involving chemical warfare agents and were related to the U.S. Army's Aberdeen Bombing Mission (ABM). The area, which was under the control of the ABM during this time period, includes three former bombing targets where bombs potentially filled with chemical warfare agents may have been tested. Beyond the ABM activities, the records show that the area's history includes other bombing and targeting related activities in which various types of industrial chemicals and incendiary devices were used.

A feasibility study has been prepared to evaluate four different alternatives to reduce the risk of contact with potential buried CWM at Site 442. All of the alternatives involve leaving the debris in place. Because site investigations have shown that the debris is not contaminating the surrounding soil and groundwater, containing the debris is safer than removing it. All of the alternatives, with the exception of the "No Further Action" alterna-



SSSMOKIN'

Military members test smoke bombs and make a smoke screen at Muroc Army Air Field, now known as Edwards Air Force Base (named after Capt. Glen Edwards — a copilot of the YB-49 that crashed near the base in 1948).

tive required by environmental regulations, include the use of land use controls such as the construction of fences to keep site workers from inadvertently uncovering buried CWM. Some of the alternatives include using concrete berms and additional cover materials to keep stormwater out of the debris trenches, providing an extra measure of protection to groundwater.

A proposed plan to present the Air Force's recommendation of "No Further Action" for Site 426 and the preferred alternative to address the potential buried CWM at Site 442 is expected to be available for public review later this year.

RTS

NEWMAN

From page 5

reational areas such as parks and bike trails," he said. "One proposal is to build a park across the street from Rosamond's main supermarket, near the freeway. I'd like to know how residents feel about this proposal — if it will benefit the community or if a park is desperately needed somewhere else."

Newman's concern as a public representative is lack of community interest. "I've seen it with the RAB, community interest is dwindling. I don't know if people are not being informed, are too busy or feel everything is fine just as it is." Newman hopes Rosamond residents will contact him if they have further questions or concerns regarding the RAB or recreational development.

Newman jokes that even as a chemistry professor he maintains ties to the aeronautical world. "I'm a member of a hobby club in Rosamond that builds airplane models,"

Newman said. "So in a way, I'm designing airplanes but on a much smaller scale." Examples of his model building can be found hanging in the Air Force Flight Test Center Museum on Edwards AFB and at the Wanda Kirk Branch Library in Rosamond.

For Newman, the best part of building models happened when he involved the community. "The Rosamond library has an after-school program for the local children. Last year, we showed them how to build a model airplane. We made 250 models. It was a lot of fun," he added.

He enjoys mountain biking on the dirt trails of Rosamond and frequently hikes with his wife. High-school sweethearts, the couple has explored Arizona's Grand Canyon and California's Sequoia National Park. A personal pastime of Newman's is digging into the history of Rosamond as a member of the Kern-Antelope Historical Society.

Dr. Newman's contact information is listed on the back of this newsletter.



COMMUNICATING — David Newman speaks with a resident from the community at a RAB meeting held in Rosamond, Calif. Members of the community surrounding Edwards AFB have the opportunity to ask or raise questions through their local RAB representative. A list of representatives is located on page 8.

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North Base

Vacant

South Base

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**AF Research Lab/
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Published data and documents relating to the Environmental Restoration Program are available for public review in information repositories at four locations. The current information repositories are located in the cities of Boron, Lancaster and Rosamond, as well as Edwards AFB. They are updated when new documents are released.

If you have any questions about information in the repositories, please contact Gary Hatch, Environmental Public Affairs at (661) 277-1454 or through e-mail at gary.hatch@edwards.af.mil.

**Location Days and Hours of Operation**

Location	Days and Hours of Operation
Edwards AFB Library 5 W. Yeager Blvd. Building 2665 Edwards AFB, Calif. (661) 275-2665	Mon-Thurs 9:30 a.m. - 7 p.m. Fri 9:30 a.m. - 6 p.m. Sat & Sun 10:30 a.m. - 6 p.m.
Kern County Public Library Wanda Kirk Branch 3611 Rosamond Blvd. Rosamond, Calif. (661) 256-3236	Tue & Wed Noon - 8 p.m. Thurs-Sat 10 a.m. - 6 p.m.
Los Angeles County Public Library 601 W. Lancaster Blvd. Lancaster, Calif. (661) 948-5029	Mon-Wed 10 a.m. - 8 p.m. Thurs & Fri 10 a.m. - 5 p.m. Sat 11 a.m. - 5 p.m.
Col. Vernon P. Saxon, Jr. Aerospace Museum 26962 Twenty Mule Team Road Boron, Calif. (760) 762-6600	Mon-Sun 10 a.m. - 4 p.m.



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